

CLAIMS

What is claimed is:

1 1. A leak detection apparatus for use in plumbing fixtures and devices which include an
2 inlet fluid valve for fluid flow to occur comprising:

3 a detector circuit to detect the flow of fluid,

4 a timer circuit operatively connected to said detector which detects that the fluid

5 flow duration is outside of a predetermined duration, and

6 an alarm circuit operatively connected to said timer circuit which sounds an

7 alarm in response to the timer circuit detection state.

1 2. The leak detection apparatus of claim 1 further including a valve operatively
2 connected to the alarm circuit whereby the valve closes to cause fluid flow to the said
3 plumbing fixture to cease upon detection of an alarm condition.

1 3. A leak detection apparatus for use in plumbing fixtures and devices which include an
2 inlet fluid valve for fluid flow to occur comprising:

3 a detector circuit to detect the flow of a fluid,

4 a timer circuit operatively connected to said fluid flow detector which detects that
5 the fluid flow duration is outside of a predetermined window of duration,

6 a valve operatively connected to said timer circuit which closes to cause the fluid
7 flow to the device to cease in reaction to the state of the timer circuit.

1 4. The leak detection apparatus of claim 1 whereby further a moisture sensor is placed
2 on or about the floor of the said plumbing fixture to detect the presence of fluid on such
3 surface, wherein said moisture sensor is operatively connected to the alarm's circuit to
4 activate the alarm in the event that fluid is detected on the fixture support surface.

1 5. A method of limiting fluid overuse in a plumbing fixture comprising the steps of
2 detecting the fixture's fluid flow duration during a operating cycle;
3 measuring the duration of said fluid flow;
4 comparing said fluid flow duration against a preestablished flow duration range;
5 and
6 causing an alarm condition if said fluid flow duration is outside of the
7 preestablished flow duration range.

1 6. The method of claim 5 above further including the step of activating a fluid valve to
2 terminate the flow of fluid into the fixture upon an alarm condition.